

REMARKS/ARGUMENTS

The Examiner is thanked for the review of the application.

Claims 1, 3-7, 9-14, 16-28 remain in this application. Claims 1, 3, 14, 21, 23 and 24 have been amended. No new matter has been added.

In the Office Action dated June 5, 2007, the Examiner has rejected Claims 1, 3-7, 9-13, 26, 27 and 28 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Regarding this rejection the Examiner has stated that "Claim 1 is directed to an apparatus. However, claim 1 lacks 'structure'. Therefore, the scope of Applicant's claimed apparatus is unclear to one of ordinary skill (*In re Zletz*, 3 USPQ2d 1320 (Fed. Cir. 1989))."

Base Claim 1 has been amended to recite "An apparatus for implementing a preferred set of prices for a subset of a plurality of products, comprising computer readable media, comprising: a database configured to store initial prices for a plurality of products; a modeling engine configured to create a demand model for the plurality of products based on Bayesian modeling; a subset generator configured to designate a subset of products of the plurality of products, wherein the number of products in the subset of products is less than the number of products in the plurality of products, the subset being designated by solving an integer problem, and wherein the subset generator is also configured to enable a number N to be designated and the subset generator is also configured to select no more than N products of the plurality of products to form the subset of products, and wherein the selected no more than N products has the largest impact on optimization of prices of any subset of no more than N products of the plurality of products; an optimizer configured to optimize prices for products in the subset of products, using the created demand model, while maintaining the initial prices of products of the plurality of products that are not in the subset of products, wherein the optimization includes relaxation of constraints; and an interface configured to report the optimized prices of the subset of products for price setting, wherein the price setting establishes the amount of money consumers pay for each product of the subset of product." (Emphasis Added).

Support for amendments to Base Claim 1 may be found on page 12, lines 7-9 of the specification as filed, which states "The price optimizing system 100 comprises an econometric

engine 104, a financial model engine 108, an optimization engine 112, and a support tool 116.” See also, page 133, lines 4-6 of the specification as filed, which states “Subset optimization provides optimization by making price changes over a subset of products while holding the prices of the remaining products constant.” See also, page 134, lines 5-7 of the specification as filed, which states “Since the price of no more than N products is changed . . . only a subset of the product category is optimized.”

Applicants believe that the base Claim 1, as amended, has sufficient “structure”, and is now in compliance with 35 U.S.C. § 112 second paragraph.

In the same Office Action the Examiner has rejected Claims 26 and 27 under 35 U.S.C. 112, second paragraph, as being indefinite, stating “[t]he terms ‘obvious’ and ‘unusual’ in claims 26 and 27 are relative terms which renders the claims indefinite.”

Applicants respectfully point out that the Claims 26 and 27 were amended in a previously office action as to eliminate the terms “obvious” and “unusual”. It is believed that this rejection was an oversight by the Examiner, and is moot in light of the previous amendments.

Additionally, the Examiner has rejected Claims 1 and 3-7, 9-14 and 16-28 under 35 U.S.C. 101, stating that “the claimed invention is directed to non-statutory subject matter. Claims 1, 14, 21, 23 and 24 are directed to algorithm. For example, claims 1, 14, and 23 are directed to ‘optimizing prices’ while ‘holding’ initial prices constant. This merely describes a step in a calculation. Therefore, as the claimed algorithm has not been used to produce a useful, concrete and tangible result.”

Claims 1, 14 and 23 have been amended to recite, in relevant part “report[ing] the optimized prices of the subset of products for price setting, wherein the price setting establishes the amount of money consumers pay for each product of the subset of product.”

Likewise, Claims 21 and 24 have been amended to recite, in relevant part “setting prices for the subset of products according to the received new prices, wherein the price setting establishes the amount of money consumers pay for each product of the subset of product.”

Support for amendments to claims 1, 14, 21, 23 and 24 may be found on page 133, lines 4-6 which states “Subset optimization provides optimization by making price changes over a subset of products.” See also page 14, line 20 to page 15, line 2 which states “The optimal (preferred) set of

prices may be sent from the optimization engine 112 to the support tool 116 so that the stores 124 may . . . obtain the optimal set of prices. . . . The price of the products in the stores 124 is set to the optimal set of prices (step 236), so that a maximization of profit or another objective is achieved." (emphasis added).

Applicants submit that the "setting prices" of Claims 1, 14, 21, 23 and 24, as amended, describes more than a mere algorithm since some real world result occurs. Also, price setting as disclosed in Claims 1, 14, 21, 23 and 24 is useful, concrete and tangible. Profit maximization is integral to the success of businesses, thereby fulfilling usefulness. Prices actually change for consumers, thus there is a tangible element to the price setting. Likewise, the price setting is non-arbitrary, as it is designed to maximize profit or another objective. Thus, price setting is also concrete. As such, Applicants believe that Claims 1, 14, 21, 23 and 24 are now in compliance with 35 U.S.C. 101.

In the same Office Action the Examiner rejected Claims 1, 3-7, 9-13, 26 and 28 under 35 U.S.C. 103(a) as being unpatentable over Ouimet et al., U.S. Patent No. 6,094,641. The Examiner stated that "Ouimet et al. teach an apparatus comprising a computer readable media that can be used for calculating a preferred set of prices for a plurality products or a subset of said plurality (figure 2)." Moreover, in support of the terse rejection, Examiner stated that "[i]t has been held that while features of an apparatus may be recited either structurally or functionally, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function alone (MPEP 21 14; *In re* Swineheart, 169 USPQ 226; *In re* Schreiber, 44 USPQ2d 1429 (Fed. Cir. 1997))."

As stated above, Claim 1 has been amended to recite an apparatus claim reliant upon structure. Applicants respectfully submit that Ouimet '641 does not appear to have the "subset generator" for designating a subset of products as disclosed in Claim 1.

As Applicants have previously contended, Ouimet '641 appears to **incorporate "psychological factors" into a demand model** for pricing (column 1, lines 54-56) (emphasis added). **Ouimet does not teach or suggest generating subsets.** In fact, it appears that what is disclosed in Ouimet **necessarily applies to all products** because a tuning of the demand model, as is disclosed in Ouimet, results in an evenhanded application to all products in order to produce meaningful results. Thus, Ouimet appears to tune a demand model which is very different from the

present invention's subset designation for optimization. As such, Applicants respectfully traverse the rejection.

In the same Office Action the Examiner rejected Claims 14 and 16-27 under 35 U.S.C. 103(a) as being unpatentable over Ouimet et al., U.S. Patent No. 6,094,641 in view of Hartman et al., U.S. Patent No. 5,987,425 and Delurgio et al., U.S. Patent No. 6,553,352. The Examiner stated that "[r]egarding, the selection of a subset of products, Hartman et al. teach product subsets being determined by 'experienced retailers' who have a 'good feel for the price sensitivity of items' in a product line ('425, column 5, lines 48-64)." Moreover, Examiner stated that "the language of 'and wherein the selected no more than N products has the largest impact on optimization of prices of any subset of no more than N products of the plurality of products' . . . merely further describes 'N' and does not affect the steps of 'storing', 'creating' and 'designating' as 'N' is never used to optimize a price for a product."

Claim 14 has been amended to recite in relevant part "designating a subset of products of the plurality of products, wherein the number of products in the subset of products is less than the number of products in the plurality of products, the designating a subset of products comprising: generating a set of candidate products of the plurality of products; designating a number N; determining which N products of the candidate products have the largest impact on optimization of prices by solving an integer problem; and selecting no more than N products of the plurality of products to form the subset of products using the determination of which N products have the largest impact on optimization."

Support for the amendment to Base Claims 14 may be found on page 134, lines 10-19 of the application as filed, which states "The subset optimization may choose the products that comprise this subset in a way that has the largest impact on the client's objective function. If, for example, the client's objective is to maximize profit, it is desirable to populate the subset of products whose prices are allowed to change with those products that are most likely to have the largest impact on profit. In one way of doing this ... to obtain a new set of optimized prices." Also see page 135, lines 16-21 of the application as filed, which states "an embodiment of the step of optimizing product category within subset limits (step 2207). A first step constructs a set of products that will be considered as candidates for the subset to be optimized (step 2301). A second step chooses which of the candidates will be members of the subset (step 2303), for example, by solving a mixed integer problem."

Applicants believe that Claim 14, as amended, more clearly illustrates how the “determining which N products have the largest impact on optimization of prices by solving an integer problem”, as disclosed in Claim 14, directly affects the “designating a subset of products”.

Moreover, Applicants respectfully submit that none of the cited references Ouimet et al. (US 6,094,641) in view of Hartman et al. (US 5,987,425) and Delurgio et al. (US 6,553,352), disclose or suggest the present invention, alone or in combination, as recited in base Claim 14 in light of the current amendment.

Furthermore, with regard to all pending Claims 1, 3-7, 9-14, 16-28, Applicants reiterate their belief that Hartman ‘425 is not combinable as a matter of art with Ouimet ‘641. The Examiner has stated that “each of the prior art references are directed to price optimization (‘352, abstract, ‘425, abstract; ‘641, abstract) and the Examiner contends that it would have been obvious to one of ordinary skill to allow users of the Ouimet et al. system to ... better optimize prices by grouping products according to price sensitivity (‘425, column/line 2/55-3/26).” With all respect to the Examiner, Applicants do not contend that these goals, when viewed in the abstract, may not be useful together; but rather that the methodology of **Hartman is simply incompatible with Ouimet.**

The method disclosed in Ouimet appears to be a system for further tuning a demand model by taking into account “psychological effects”. (column 3, lines 1-3). The “modified demand model from the Tuning Process [is utilized] to determine the price for each item that will **maximize profits.**” (Column 5, lines 45-50) (Emphasis added). As such, Ouimet appears to necessitate computing **specific, singular output values: the price for each item that maximizes profits.**

In contrast, Hartman teaches away from Ouimet by disclosing a method for developing “**variable margin pricing** of products” rather than a specific value (column 1, lines 6-10). In Hartman a “**radically different approach** has been taken . . . where the basic philosophy is that **retail prices only need to be close to a vague undefined target.**” (Column 2, lines 56-60) (Emphasis added). Hartman **self proclaims its “radical[]” distinctiveness** in no uncertain terms. (Emphasis added).

As such, Hartman’s **methodology appears to be at complete odds to the method of Ouimet.** With such a fundamental difference of methodology, it is clear that the methods disclosed by Hartman, and that of Ouimet, are incompatible methods and thus at the least their combinability is non-obvious.

In sum, base claims 1, 14, 21, 23 and 24 have been amended and are now believed to be allowable. Dependent claim 3 has been amended and is now believed to be allowable. Dependent claims 3-7, 9-13, 16-20, 26 to 28 which depend therefrom are also believed to be allowable as being dependent from their respective patentable parent claims 1 and 14 for at least the same reasons.

Applicants believe that all pending claims 1, 3-7, 9-14, 16-28 are now allowable over the cited art and are also in allowable form and respectfully request a Notice of Allowance for this application from the Examiner. The commissioner has been authorized via EFS to charge a one-month extension for the filing of this amendment. The commissioner is authorized to charge any additional fees that may be due to our Deposit Account No. 50-2766 (Order No. DEM1P008). Should the Examiner believe that a telephone conference would expedite the prosecution of this application, the undersigned can be reached at telephone number 925-570-8198.

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